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SAGE NOTES

April 1996 Sage Notes A Publication of the Idaho Native Plant Society Vol. ~~18~~ 19 (1)

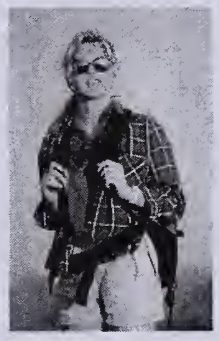
Please check you mailing label!! If is says expires 12/94 this means we have no record of the 1995 dues paid. In order to renew your membership through 1996 you will need to remit dues for both 1995 and 1996. INPS operates primarily on the precious time that all officers, editors, and committee members donate, but we can not operate without your minimal dues. Please contact Janice Hill, State Treasurer if you have questions: 2990 State Highway 3, Deary, ID 83823. Please pardon the delay in cashing checks as we are currently changing state treasurer.

CHAPTER NEWS

Pahove Chapter

Pahove Chapter meetings are the 3rd Thursday of each month, 7:30 p.m. at BSU, Biology Dept., Second floor room varies.

Summer speakers:



- April 18, 1996 - speaker to be announced later.
- April 21, 1996 - Earthday celebration, Barber Park, Larger than before "Native Plant Sale"
- April - Ethnobotany and Archeology Walk - during Archeology Week
- May - Celebrating Wildflowers Month. Keep an eye out for fliers that will detail planned activities
  - Weekly field trips every Thursday. Meet at the Old Penitentiary in Boise at 6:30 p.m.
  - Hulls Gulch walk (May 25th or Saturday before)
- June - Native Garden Tour, contact Ann DeBolt

White Pine

White Pine Chapter meetings are to be held in Room 200 of the Forest, Wildlife and Range Sciences Building, College of Forestry, University of Idaho (6th and Line Streets). They are as follows:

- March 28: "From Tortolas to Tierra del Fuego: the Flora and Vegetation of the Southern Andes." Photography presentation. For further details see the Calendar section of this newsletter.

CALLING 4 ART

Do you have any art that you would like to grace these pages?

Please send to the editor, See last page for address.

IDAHO CONSERVATION EFFORT

State and federal agencies are cooperating to support conservation of rare plant and animal species through the Idaho Conservation Effort. The effort began in 1994 when the Department of Fish and Game, USDA Forest Service (Intermountain [southern Idaho] and Northern Regions [northern Idaho]), Bureau of Land Management, U.S. Fish and Wildlife Service, and the Idaho Department of Parks and Recreation signed a memorandum of understanding. The purpose of the MOU was "...to establish a general framework for cooperation and participation among the signatories in the conservation of federally listed candidate and sensitive species and species of special concern in the state of Idaho." Through proactive conservation efforts, it is hoped that population levels can be maintained high enough to achieve conservation without becoming involved with endangered species listing. The conservation effort encourages involved parties to work together in identifying creative and productive partnerships to conserve plant and animal species.

Through the MOU, an operational committee of agency decision makers oversees the activities of a technical committee of scientists. The technical committee, in turn, administers the activities of teams of pertinent scientist who develop habitat conservation assessments and conservation strategies (HCA/CS's) for identified species. The HCA/CS's are being developed for 46 species.

The state effort follows in the spirit of a federal memorandum of understanding that was signed between the Forest Service, Fish and Wildlife Service, Bureau of Land Management, National Park Service, and the National Marine Fisheries Service in January of 1994.

Is The Endangered Species Act Being Gutted In Order To Save It?

--by Steve Stuebner. reprinted from High Country News; Volume 27(18); 1995

Like a navigator of a sinking hot air balloon, the USFWS is hastily casting off heavy parts of the Endangered Species Act -- perhaps before a reform-minded Congress grounds the law altogether.

The latest changes surfaced in late July when the Interior Department announced new streamlined, "user-friendly" consultation procedures for federal land agencies. Under the ESA, the Forest Service and the Bureau of Land Management must consult with federal biologist before approving activities that might harm endangered species. Environmentalists have long complained that the agencies fail to take consultation seriously and the courts have often supported them, delaying timber sales and other projects.

Two weeks earlier, USFWS Director Mollie Beattie ordered her staff to apply a more rigorous scientific standard before deciding whether to list a species. In the same memo, Beattie eliminated the Category II list of about 4,000 candidate species.

The plants and animals listed under Category II may need federal protection, agency officials say, but have lower priority due to insufficient scientific information. By axing Category II, the agency leaves itself with a much smaller -- and to landowners and lawmakers, less threatening -- list of 182 Category I species that await formal protection under the law.

The changes follow another made last December which narrows the definition of what constitutes a distinct "population segment" of a species. That means species that are abundant in Canada and elsewhere but rare in the United State, such as the woodland caribou, may not receive federal protection.

"The Clinton administration is trying to save the Endangered Species Act by destroying it," charges Jasper Carlton of Boulder, Colo.-based Biodiversity Legal Foundation. "They're deserting sound science because they're scared to death of a right-wing congress.'

Members of Congress intent on rewriting the law have criticized the Fish and Wildlife Service for trying -- often at great expense -- to protect species they consider to be of marginal importance to the public. Bills substantially limiting the act have already been introduced in both the House and Senate.

Carlton believes the agency's new policies are not only politically driven and bad for the nation's plants and animals, but are also illegal. "They're unilaterally changing policy without going through any rule-making procedure or public review process.

An agency spokesman denies the political climate prompted the new standards. Ren Lohoefener, deputy chief of endangered species enforcement for the Fish and Wildlife Service in Washington D.C., says "We just want to do a better job of identifying and protecting species of concern on a national basis."

The agency is working with the states to develop a national "high-priority" list of rare and endangered species, Lohoefener says. "When we have developed that list, along with all of our partners, the benefits should be tremendous," he says.

We're trying to focus on the species that are most in need of protection," say staff biologist Rick Sayers. "The Category I species are the highest priority. Category II species can't be as high of a priority. If at a later date, someone provides more information to justifying bumping that species to Category I, then that will occur. It happens all the time."

Critics contend that by eliminating the Category II list the agency will send some of the 4,000 species the way of the dodo bird. "They're trying to find ways to bureaucratically sweep species under the rug," says Eric Glitzenstein, an environmental lawyer in Washington, D.C.

Pam Eaton, a staffer with the Wilderness Society of Denver, says the Category II list provided the agency with advanced warning.

"they (agency officials) talk a lot about getting ahead of the curve and helping species that may soon be headed toward extinction," she says. "Those species are on the Category II list."

Environmentalist also criticize the agency's new rules requiring the addition of "substantial" information -- well-documented peer reviewed scientific data -- with any petition for listing. Carlton, who has filed more that 100 petitions says "Take the mountain yellow-legged frog. We know this species is teetering on the edge of extinction -- gosh, we've only got a handful. But do we have to wait for a peer reviewed study before we protect it?

Even Fish and Wildlife Service officials admit that tightening that standard for listing may drive some species to extinction, particularly those without any perceived economic or societal value.

"If the species are considered to be really important to society, we probably know about them." says Sayers. "For those that are really important ecologically, it's possible we don't know about them.

"And I think it's very safe to say there are lots of species that could use their habitats protected that the Service isn't aware of yet."

No agency decision on endangered species has ever been overturned on sloppy science, Sayers says, but the USFWS wants to be able to defend its decisions to Congress.

Partnership Seeks to Prevent Endangered Species Act Listing

By: Bureau of Land Management

A unique partnership has been created in Idaho to prevent hundreds of "at risk" species of plants, fish, and animals from being listed as threatened or endangered under the Endangered Species Act.

The partnership, known as the "Idaho federal, state and local government such (BLM), U.S. Forest Service, Idaho Idaho Department of Transportation, and Cascade Corporation and The Caribou partnership was formed after agencies impacts of the listing of sockeye and agencies to submit all proposed timber projects, and other activities in salmon Service for approval.

State Conservation Effort", consists of as the Bureau of Land Management Department of Fish and Game, and private businesses including Boise Cattleman's Association. The and businesses began to feel the chinook salmon. The listing required sales, grazing land, road construction habitat to the National Marine Fisheries

"As government agencies and private businesses had to deal with that, they became aware that it was really just too difficult of a process to go through and that they needed to try to head off these listings," said Lyle Lewis, ecologist with the BLM.

The primary goal of the Idaho State Conservation Effort is to stabilize the populations of plants, fish, and animals "at risk" of being listed as threatened or endangered by removing threats to them. The partners have already developed strategies to remove threats to 8 species, such as the Bonneville cutthroats trout, Idaho ground squirrel, and Coeur d'Alene salamander, and are working on strategies to protect another 38 species, including the trumpeter swan, Colombian sharp-tailed grouse, and wolverine.

"One of the biggest advantages to this approach is flexibility ," said Chuck Harris, research biologist with the Idaho Department of Fish and Game. "We have a lot more options to manage species and try to improve conditions for them before they've listed, while we still have a fairly good population level and a reasonable amount of habitat left."

After the strategies are developed, they are made available for public for review. Then Conservation Agreements, which are commitments to implement the strategies, are signed by agencies with jurisdiction over the species and its habitat and affected private businesses.

In many cases, the strategies require the same changes in land use practices that would be required if the species were listed. However, partners in the Idaho State Conservation Effort believe it still makes sense to be proactive.

"Even if changes in land use practices are required, it's much easier to have those identified, agreed to, and planned for upfront, rather than having a species get listed and getting into the regulatory mode and all the constraints that brings," said Jonathan Haufler, manager of wildlife and ecology for the Boise Cascade Corporation.

Idaho State Conservation Effort also has the potential to save significant amounts of taxpayer funds. The price tag for listing a species under the Endangered Species Act and writing a recovery plan can cost millions of dollars.

Sometimes developing and implementing Conservation Strategies will not be enough to prevent species from being listed under the Endangered Species Act. However, even if a species is eventually listed, partners believe the Idaho State Conservation effort will still pay off by making the U.S. Fish and Wildlife Service, or the National Marine Fisheries Service, approval process go much smoother and faster.

Revision of Federal Candidate System

The U.S. Fish and Wildlife Service revised its candidate system in early 1996. The Category 1 (C1), Category 2 (C2), and Category 3 (C3) designations have been abandoned. There are now only Candidate species, but few of the former candidates of any level were placed on this new candidate list. In fact, only one rare plant in Idaho was placed on the newly adopted Candidate list, *Castilleja christii*. All other former federal candidate plant species (C1, C2, and C3) found in Idaho have been removed from the list. Unfortunately, removing these plants from consideration for listing under the Endangered Species Act did not make these rare plants less rare nor remove their threats.

The 1996 INPS Rare Plant Conference attendees were tasked with developing a means for tracking the rarest of Idaho's flora. This required developing some new terminology. To understand the changes let's review the protocols at the previous Rare Plant Conferences. The conference usually starts out with a review of the status of federal candidate species followed by a review of those plants that are rare in Idaho, referred to INPS or state rare plants. What is the difference between federal candidates and state rare plants? Asked another way: So, how rare is rare? The Federal Candidate species are typically rare throughout their range; their entire range may be only Idaho, but could include a few populations in several states. The INPS rare plants are rare in Idaho, but are common globally.

The Rare Plant Conference evaluates the status of our knowledge (populations and the number of plants in the populations, threats to populations, field surveys, and population monitoring efforts). The federal candidate species were reviewed first. These candidates were not provided with an additional ranking by the

INPS. The candidate review was followed by a similar review for those plants that are state rare plants which are categorized as Priority 1, and 2, Sensitive, Monitor and Review.

Since the new candidate list excludes most of the "former federal candidates" these were effectively left in the "twilight light zone". Since they did not fit within the current state rare plant definitions new categories needed to be adopted to bring them back from the "zone". The new term is INPS Globally Rare. The global ranks (G1-G5) are based on a system developed by the Association of Biodiversity Information and The Nature Conservancy. The USFWS and INPS ranks are listed below. In addition, to an assigned Global rank, each globally rare species continues to receive a Threat Priority rank, between 1 and 12. This Priority rank is based on the USFWS Listing Priority criteria, also listed below.

The INPS Rare Plant Conference will continue to recommend species for federal candidate list, and also for conservation agreements(see related article). The INPS Rare Plant Conference Committee is reviewing the issue of listing and conservation agreement and will make recommendations to the INPS Board.

DEFINITIONS

USFWS Status:

E = Endangered; taxa in danger of extinction throughout all or a significant portion of their range.

T = Threatened; taxa likely to become endangered in the foreseeable future throughout all or a significant portion of their range.

Candidate• = taxa for which substantial biological information exists on file to support a proposal to list as Endangered or Threatened, but no proposal has yet been published in the Federal Register.

Global and National Rank:

G = Global rank indicator; denotes rank based on rangewide status.

T = Trinomial rank indicator; denotes rangewide status of infraspecific taxa (varieties or subspecies).

N = National rank indicator; denotes rank based on status within the United States.

1 = Critically imperiled because of extreme rarity or because of some factor of its biology making it especially vulnerable to extinction (typically 5 or fewer occurrences).

2 = Imperiled because of rarity or because of other factors demonstrably making it very vulnerable to extinction (typically 6 to 20 occurrences).

3 = Rare or uncommon, but not imperiled (typically 21 to 100 occurrences).

4 = Not rare and apparently secure, but with cause for long-term concern (usually more than 100 occurrences).

5 = Demonstrably widespread, abundant, and secure.

Changes to Listing Process and Federal Candidate List

By: Jim Bartell, Botanist, Region 1, U.S. Fish & Wildlife Service

ESA Definitions

- Section 3(6) of the ESA defines an "endangered species" as:

  "any species which is in danger of extinction throughout all or a significant portion of its range other than a species of the Class Insecta determined by the Secretary to constitute a pest whose protection under provision of this Act would present an overwhelming and overriding risk to man"

- Section 3(15) of the ESA includes in "species":

  "any subspecies of fish or wildlife or plants, and any distinct population segment of any species of vertebrate fish or wildlife which interbreeds when mature"

- Section 3(19) of the ESA defines "threatened species" as:

  "any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range"

Five Listing Factors

- The presence of threatened destruction, modification, or curtailment of its habitat or range
- Over utilization for commercial, recreational, scientific, or educational purposes
- Disease or predation
- The inadequacy of existing regulatory mechanisms
- Other natural or manmade factors affecting its continued existence

"Raising of the Bar"

- 1978 Amendments - Vague and simple rules, but 2 year deadline and critical habitat economics (did not know how to list many plants)
- The "Watt" years - "Paralysis by analysis" and the backlash (Could not list anything)
- 1982 Amendments - No expiration deadline, 1-year deadline for final rules, no economics in listing (Plant listings generally east of the Mississippi River)
- "Era of Litigation" - Hawaiian (1989) and California (1991) plant suits, and the Fund for Animals (1992) suit (Rule making expedited, multi-species packages, error on the side of species)
- "Era of Reverse Litigation" - coastal California gnatcatcher (1992), Bruneau Hot Springs Snail and Idaho snails (1993), and vernal pool fair shrimp suits (1995) (Knowledgeable well-represented opposition, expanded and thoroughly documented rules, do not error)

Historic Origins of Plant Notice

- Section 12 of the ESA directed the Smithsonian Institution in 1973 to review:
  - Plant species that may become endangered or threatened
  - Methods for adequately conserving such species, and report to Congress within 1 year

Priority Rank For Listing

		Threat	
Priority Rank	Taxonomy	Magnitude	Immediacy
1	Monotypic genus	High	Imminent
2	Species	High	Imminent
3	Subspecies/Variety	High	Imminent
4	Monotypic genus	High	Non-imminent
5	Species	High	Non-imminent
6	Subspecis/Variety	High	Non-imminent
7	Monotypic genus	Low	Imminent
8	Species	Low	Imminent
9	Subspecies/Variety	Low	Imminent
10	Monotypic genus	Low	Non-Imminent
11	Species	Low	Non-imminent
12	Subspecis/Variety	Low	Non-imminent

STATE RARE SPECIES

State Priority 1 = A taxon in danger of becoming extinct or extirpated from Idaho in the foreseeable future if identifiable factors contributing to its decline continue to operate; these are taxa whose populations are present only at critically low levels or whose habitats have been degraded or depleted to a significant degree.

State Priority 2 = a taxon likely to be classified as Priority 1 within the foreseeable future in Idaho, if factors contributing to its population decline or habitat degradation or loss continue.

Sensitive = A taxon with small populations or localized distributions within Idaho that presently do not meet the criteria for classification as Priority 1 or 2, but whose populations and habitats may be jeopardized without active management or removal of threats.

Monitor = Taxa that are common within a limited range as well as those taxa which are uncommon, but have no identifiable threats (for example, certain alpine taxa).

Review = Taxa which may be of conservation concern, but for which we have insufficient data upon which to base a recommendation regarding their appropriate classification.

Possibly Extirpated = Taxa which are known in Idaho only from historical (pre- 1920) records or are considered extirpated from the state.

- In response to the Smithsonian Institution report submitted to Congress on January 9, 1975. The Service:
    - On April 21, 1975 published a notice of review of status for 4 eastern United States plants
    - On July 1, 1975 published a notice of review of status for over 3,000 "endangered" or "threatened" plant species in the United States
    - On June 16, 1976, published proposed rule for approximately 1,700 United States Plants

Notices of Review

- Previous notices
    - Plant notices (1980, 1983, 1985, 1990, and 1993)
    - Vertebrate notices (1982 and 1984)
    - 1984 invertebrate notice
    - Animal notices (1989, 1991, and 1994)
- Current notice - 1996 comprehensive list of both plants and animals

Past and Current Terminology

- Candidates in previous notices
    - Category 1 (C1) - Species for which the Service has on file sufficient biological vulnerability and threat data to support issuance of proposed rule, but precluded by other listing activity
    - Category 2 (C2) - Species for which available information indicates listing possible appropriate, but insufficient biological vulnerability and threat data to support issuance of proposed rule
- Non-candidates in previous notices
    - Category 3A - extinct
    - Category 3B - not species under ESA
    - Category 3C - too widespread or not threatened
- Candidates in current notice
    - Species now proposed as endangered or threatened
    - Species for which the Service has on file sufficient biological vulnerability and threat data to support issuance of proposed rule, but precluded by other listing activity (former C1)
- Non-candidates in current notice
    - Species of concern - Species for which insufficient biological vulnerability and threat data available to support issuance of proposed rule
        - Some former C1 or C2 species
        - All G1, G2, and G3 species
    - Non-Species of concern - Species for which available biological vulnerability and threat data do not support issuance of proposed rule
        - Some former C1 or C2 species
        - Former C3 species

1996 NOTICE OF REVIEW

(IDAHO PLANTS)

TABLE 1 - IDAHO PLANTS ON CANDIDATE LIST

SCIENTIFIC NAME	COMMON NAME	RANGE
Castilleja christii	Paintbrush, Christ's	ID

TABLE 2 - IDAHO PLANTS REMOVED FROM C1 STATUS IN 1996 NOTICE OF REVIEW

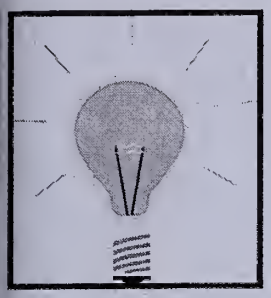
SCIENTIFIC NAME	COMMON NAME	RANGE	STATUS	
			CODE	EXPL.
Allium aaseae	Onion, Aase's	ID	S	A
Aster jessicae	Aster, Jessica's	ID,WA	S	I
Astragalus mulfordiae	Milk-vetch, Mulford's	ID,OR	S	A
Calochortus nitidus	Mariposa, broad-fruited	ID,WA	S	A
Draba trichocarpa	Whitlow-grass, Stanley	ID	S	I
Haplopappus insecticruris	Goldenweed, bugleg	ID	R	A
Haplopappus radiatus	Goldenweed, Snake River	ID,OR	S	A
Oenothera psammophila	Evening-primrose, sand-loving	ID	S	A
Phlox idahonis	Phlox, Clearwater	ID	S	A

R Taxa previously regarded as candidates but no longer regarded by the service as candidates or species of concern

S Species of concern

A Taxa that have proven to be more abundant or widespread than previously believed or those not subject to any identifiable threat

I Taxa for which the Service has insufficient information on biological vulnerability and threat(s) to support issuance of proposed rule



NEW BOOKS!!

Book Reviews Courtesy of Roger Rosentreter:

Macrolichens of the Northern Rocky Mountains by Bruce McCune and Trevor Goward. 1995. Mad River Press, 141 Carter Lane, Eureka, CA 95503-9549, (707) 442-2947. $24.95.

For anyone who would like to learn the common lichens in Idaho, this book is one of a kind. It makes identification of Idaho lichens easier than other lichen floras due to its focus on the Northern Rocky Mountains. The book includes all the macrolichens and many lichens some authors would consider microlichens. It covers foliose, fruticose and squamulose species within the Northern Rocky Mountains. It also highlights similar species from nearby regions. This thorough coverage makes it easier to determine a wide range of lichen specimens. Bruce McCune has collected extensively in Idaho and has reviewed all the lichen herbaria within the State. He has developed simple, straight forward keys that minimize the use of chemicals and microscopic features. Some species will still require detailed examination or chemical tests, but the habitat information and comparison charts (conspectis) provided assist tremendously. Floras covering larger areas, such as "How to Know the Lichens" by the late Mason Hale are by their nature more difficult to use than regional treatments. Line drawings by the authors and others also aid in the identification of specimens. This books cover is a soft cover with a plastic spiral binder that conveniently remains open as one reviews a specimen.

The Elfin World of Mosses and Liverworts of Michigan's Upper Peninsula and Isle Royale by Janice Glime. Published by Isle Royale Natural History Association, 800 E. Lakeshore Drive, Houghton, MI 49931, (800) 678-6925 or (906) 482-7860. $15.95.

This field guide to mosses and liverworts is user friendly for the lay person or botanist unversed in bryology. The author includes common names for all the species she covers as well as some very interesting stories about many of the species. The field guide covers 123 species, including ecological and morphological descriptions and color photographs for each. Economic and cultural uses by many of the plants are noted. Although this book is focused on a different part of the country, many classic vascular plant botanists and amateurs will find it their favorite and most used book on mosses. If you are interested in mosses, this book will spark it further.

CALENDAR

March 28 - Photography Presentation: *"From Tortolas to Tierra del Fuego: the Flora and Vegetation of the Southern Andes" by Bob Moseley.* Bob is the director of the Idaho Conservation Data Center in Boise, which tracks rare plants, animals, and plant communities in Idaho, and which is a part of the national network of heritage programs begun by The Nature Conservancy. Bob and his wife, Susan Bernatas, have spent three winter vacations trekking and climbing in Chile and Argentina, and recently returned from an expedition in the northern Andes of Venezuela. Bob's experience in nature photography promises to make this an outstanding presentation, 7:30 PM, Rm. 200, Forestry, Wildlife and Range Sciences Building, College of Forestry, U of Idaho.

June 7th, 8th and 9th - Field Trip to Oregon: A field trip is being planned to the far southeastern reaches of the state of Oregon, an area little explored and virtually unknown to botanists and wildlife biologist. On June 7 all interested parties are requested to report to the parking area of the McDermitt Motel at 4:00 p.m. We will then depart for Anderson Crossing and points east. Saturday and Sunday, June 8 and 9, will be spent making collections and exploring the Toppin Creek Butte country, or any other interesting looking areas in this remote region of Oregon once called the "geographical center of nowhere".

Detailed maps will be available. Four wheel drive vehicles are preferable, although people may double up if rigs are available. We will be camping in remote places; everyone will be responsible for their own gear, food, and gas. Please call Jean Findley (botanist) or Al Bamman (wildlife biologist) at the Vale District BLM office (514) 473-3144 if you are interested. Jean also may be reached at home (541) 889-5908.

NETSCAPE

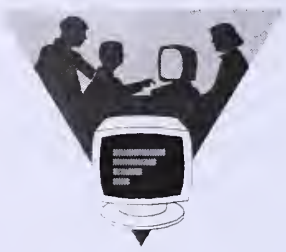
http://herbarium.conncoll.edu. Graves Herbarium at Connecticut College

http://fna.wustl.edu/fna. The Flora of North America

http://dogwood.botany.uga.edu/. University of Georgia Botany Department

http://library.wisc.edu:80/biotech/demo/orchid/orchids_of_wisconsin.html. An on-line key, complete with photographs of all the Wisconsin orchids

http://www.state.id.us/fishgame/cdchome.htm Idaho Conservation Data Center Home Page



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NOTES

Sage Notes is published in April, May, September, and November by the Idaho Native Plant Society, incorporated since 1977 under the laws of the State of Idaho. Newsletter ads: personal ads $2.00, commercial ads for $5.00 for 1/8 page, $8.00 for 1/4 page, $15.00 for 1/2 page and $25.00 for full page. Ads should be sent with payment. Members and others are invited to submit material for publication. Articles in any form, even hand-written are welcome. Please provide a phone number in case there are questions. Material will not be returned. Send submission directly to the editor. Please contact the editor regarding computer compatibility.

OFFICERS: **State Officers**, PO Box 9451, Boise, ID 83707. President, Kristin Fletcher; Vice President, Sarah Walker; Secretary, Jim Smith; Treasurer, Janice Hill; Member-at-Large, Loring Jones; Past President and Newsletter Editor, Susan Bernatas. **Calypso Chapter**, 612 Annie Ave., Coeur d'Alene, ID 83814. President, Le Ann Eno; Vice-President, Bob Mathiasson; Secretary, *vacant*; Treasurer, Tom Ballard. **Pahove Chapter**, P.O. Box 9451, Boise ID 83707. President, Wayne Owen; Vice -President, Roger Rosentreter (acting); Secretary; *vacant*; Treasurer, Ann Bruik. **Sah-Wah-Be Chapter**, 603 Willard, Pocatello, ID 83201. Acting Chapter Head, Ruth Moorhead; Treasurer-Secretary, Harry Giesbrecht. **White Pine Chapter**, PO Box 8481, Moscow, ID 83843. President, Juanita Lichthardt; Vice-President, Dennis Ferguson; Secretary; Janet Campbell; Treasurer, Annette Bursven; Publicity Chair, Sonja Lewis; Newsletter Editor, Nancy Miller; Past-President, Ray Boyd. **Wood River Chapter**, PO Box 3093, Hailey 83333. Treasurer, Jo Ann Robbins.

INPS Board Meetings: April 6, October 5, July field trip (date unknown), February at the Rare Plant Conference.

NEWSLETTER STAFF: Newsletter Editor, Susan Bernatas; Technical Editor, Bob Moseley; Circulation Manager, Janice Hill/Mike Mancuso. Word Processing, Pat Spengler. Thanks to Ogden Environmental and Energy Services for word processing assistance.

Please send submission directly to the editor as follows:

Susan Bernatas, c/o Ogden Environmental and Energy Service, 910 Main Street, Boise, ID 83702. e-mail: sbernatas@rmci.net; phone and voice mail: 208-389-7800; FAX: 208-389-7868.

Newsletter submission deadlines: May 1; October 1, November 1.

The Idaho Native Plant Society (INPS) is dedicated to promoting interest in native plants, plant communities and collecting and sharing information on all phases of the botany of native plants in Idaho, including educating the public to the values of the native flora and its habitats.

Membership is open to anyone interested in our native flora. Send dues to Janice Hill, Treasurer at 2990 State Highway 3, Deary, ID 83823 and all correspondence to INPS, Box 9451, Boise, ID 83707.

Please include me as an INPS member:

	Full Year Jan 1-Dec 31	Half Year July 1-Dec 31
____ Patron	$30	$18
____ Individual	$10	$6
____ Household*	$15	$8
____ Student	$7	$4
____ Senior Citizen	$7	$4

Name: _____

Address: _____

City/State: _____

Zip Code: _____ Telephone: _____

____ Chapter Affiliation?
____ Calypso (Coeur d'Alene-please include $7 chapter dues)
____ Pahove (Boise)
____ Sah-Wah-Be (SE Idaho)
____ Wood River (Ketchum Sun Valley-please include $7 chapter dues)
____ None. Those who do not live near a chapter are encouraged to join. We can put you in touch with other members in your area, and can coordinate with you on any state level activities you may wish to be involved in.

* Household memberships are allocated two votes.

Idaho Native Plant Society
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Don't forget to pay your membership dues!

Sage Notes

May 1997 * SAGE NOTES * A Publication of the Idaho Native Plant Society Vol. 19 (2)

Summer Field Trips Issue

Field trip season is here! And a welcome one it is, after an unusually snowy winter for many Idahoans. If you are feeling "cooped up" after a long winter, there's nothing like gearing up for a field trip to lift your spirits.

As we dust off field guides, hand lenses, boots, and road maps, let's thank our chapter trip organizers who have worked hard to plan these trips for us. Native plant enthusiasts can pick and choose from an exciting variety of educational and service trips being held in all parts of the state. We can look forward to exploring new areas, participating in plant inventories and rare plant monitoring, and generally having a good time traveling and learning more about Idaho's many habitats. Members and anyone interested are welcome to join any of the chapter trips described on the following pages, and all are encouraged to journey to Mt. Harrison for our three-day event, the annual state field trip and meeting.

Chapter News

Calypso Chapter--The Calypso Chapter meets at 7:00 PM on the third Wednesday of each month at the Fish and Game Office on 2750 Kathleen, Coeur d'Alene.

Sah-Wah-Be Chapter--The Sah-Wah-Be Chapter southeastern Idaho is back "on track!" We held our annual meeting, outlined new by-laws, and elected officers (both subject to ratification by the known membership), and planned both an Earth Day Eco-Fair table and a season's list of outings.

(continued on page 10)

Annual INPS State Trip and Meeting: Mt. Harrison

This year, the Idaho Native Plant Society Annual Field Trip and Meeting will be **August 8, 9, and 10** at Mount Harrison in southern Idaho, near Burley.

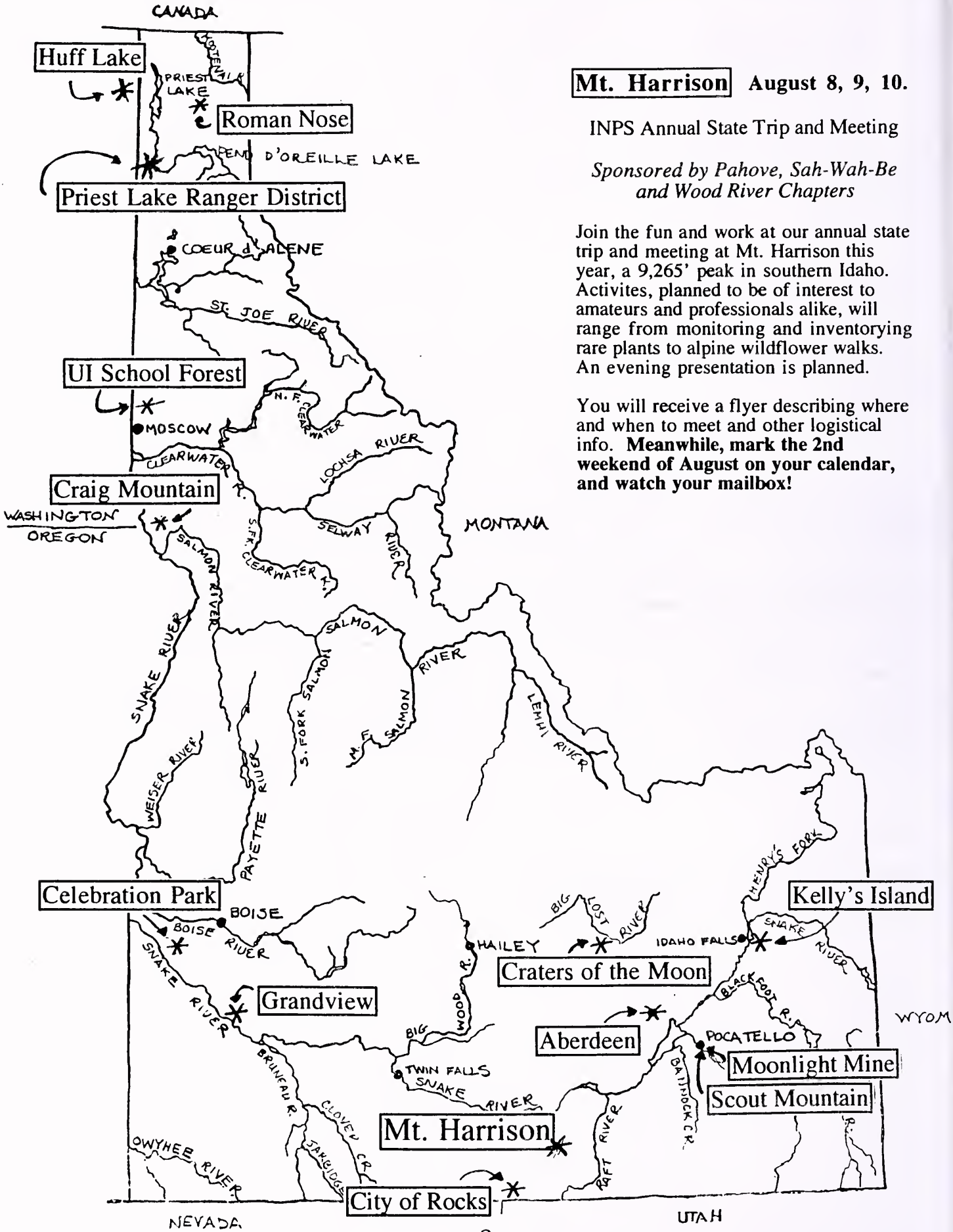
Mount Harrison (9,265 feet) is the only known home to Christ's Indian paintbrush (*Castilleja christii*), currently Idaho's only Candidate plant species identified for federal listing status. Nearby road construction is planned for this year.

Expect a variety of activities of interest to amateur botanists and professionals. Idaho Conservation Data Center's Bob Moseley needs help with his annual monitoring effort for Christ's Indian paintbrush. The area lends itself to an alpine botany walk, as well as a search for Shasta aster (*Machaeranthera shastensis* var. *latifolia*), another of Idaho's rare plants that occurs on Mt. Harrison and about which we know little.

Count on an evening program that includes introductions of the new leadership for the INPS statewide organization and opportunities to learn more about what each chapter has been up to since the last annual field trip.

Watch the mail for a special information flyer, with details of where and when to meet. **In the meantime, mark the second weekend in August on your calendar!** If you can help with the planning and/or execution of the annual field trip, please contact Nancy Cole at (208) 343-5388 or email her at nkc2525@idahopower.com. See you there!

Where exactly is Mt. Harrison you may ask? Turn the page....



Mt. Harrison **August 8, 9, 10.**

INPS Annual State Trip and Meeting

Sponsored by Pahove, Sah-Wah-Be and Wood River Chapters

Join the fun and work at our annual state trip and meeting at Mt. Harrison this year, a 9,265' peak in southern Idaho. Activites, planned to be of interest to amateurs and professionals alike, will range from monitoring and inventorying rare plants to alpine wildflower walks. An evening presentation is planned.

You will receive a flyer describing where and when to meet and other logistical info. **Meanwhile, mark the 2nd weekend of August on your calendar, and watch your mailbox!**

1997 FIELD TRIPS

Calypso Chapter trips - Janet Benoit (208) 683-2407 (home), or (208) 769-7750 (work)

Huff Lake Saturday, July 19. Diane Penny will lead. Meet at Priest Lake Ranger Station, 10:30 AM.

Priest Lake Ranger District Saturday, August 2. Art Zack will lead a tour about flowers and fire history. Call Janet Benoit (above) for time

Roman Nose Saturday, August 23. Diane Penny and Betsy Hammet will lead. Meet At Roman Nose Campsite 10:30 AM. Three hours travel from Coeur d'Alene - last 20 miles is gravel (takes about an hour).

White Pine Chapter trips - Dennis Ferguson (208) 882-8062 (evenings)

Craig Mountain/Wapshilla Ridge Saturday, May 24. Joint trip with Palouse Audobon Society. Expect spectacular wildflowers and near-pristine bunchgrass communities. Meet at 7:45 AM at the Business Incubator (corner of Sweet Ave. and Main in Moscow), or at 8:30 AM at Locomotive Park in Lewiston. Call for details.

UI School Forest Saturday, June 21. We will learn the common forest plants. Meet at northeast corner of Rosauer's lot in Moscow at 7:45 AM.

Pahove Chapter trips - Kay Beall (208) 343-2823

Celebration Park Saturday, May 31. Meet at 8:30 at the Fish and Game Office on Walnut Street. We will inventory the park for Idaho Power Company. Celebration Park is near Nampa, on the Snake River.

Grandview Saturday, June 14. This will be an all day look-see for wildflowers. We will drive a loop from Grandview to Jordan Valley. Meet at 8:00 AM at Fish and Game Office on Walnut Street.

Sah-Wah-Be Chapter trips - Ruth Moorhead (208) 233-5011. Carpool info: for weekend trips meet at the Idaho Museum of Natural History parking lot on the ISU campus at 9:00 AM..

Aberdeen Saturday, May 24. Member Dave Burrup is curious about noticeable spring effects of a fire that burned an area west of Aberdeen last year. We'll meet him at 10:00 AM at the Maverick Station in Aberdeen. Bring a lunch, or enough $$ for Maverick's munchies. Wear shoes that you can afford to get dirty.

Moonlight Mine Thursday, May 29. Meet at 6:00 PM. at the Museum. We'll head across both private and BLM land toward Moonlight Mine east of town.

City of Rocks Saturday, June 7. Dave Burrup leads us into nooks and crannies at City of Rocks. Meet at 11:00 AM at park headquarters in Almo. Bring food and "Idaho weather" clothes for this all-day adventure.

Craters of the Moon Saturday, June 21. Craters of the Moon left us hoping for more two years ago. Those who wish to wake up right in the flower garden can camp there before and/or after the trip. Those driving from Pocatello on Saturday - meet at 9:45 AM in McDonald's parking lot in Blackfoot, to carpool or caravan. We'll regroup at the Visitor Center in the Monument at noon.

Scout Mountain Tuesday, July 8. Meet at 6:00 PM at the Museum. Just about anywhere on the way to Scout Mountain is a great place to explore for wildflowers - and find a grand picnic area.

Kelly's Island Sunday, July 27. A Kelly's Island campout (Friday and/or Saturday) east of Idaho Falls leads to a Karl Holte walk--destination unknown 'til he arrives! No carpool departure time is slated for this trip...just BE THERE at 9:30 AM on Sunday morning if you want to be part of the wildflower walk. Call Ruth Moorhead (208-233-5011) for directions.

Wood River Chapter trips - JoAnn Robbins (208) 788-5585 (days) for upcoming trip info.

Larry Craig Proposes Bill to Restore "Public Land Management Responsibility and Accountability"

by Bertie Weddell, White Pine Chapter

Senator Larry Craig has proposed a bill that would profoundly alter the way public lands are managed in the West. In addition, if enacted this bill would fundamentally change the process for public comment on land management decisions and the procedure for determining potential impacts to threatened and endangered species. The bill, known as the "Public Land Management Responsibility and Accountability Restoration Act" has not yet been introduced to the Senate. Senator Craig can be reached at: http://www.senate.gov./~craig/form.htm OR 304 N. 8th St., Room 149, Boise, ID 83702, (208)342-7985 OR U.S. Senate, 313 Senate Office Building, Washington, DC 20510.

The major provisions of the bill are summarized below.

I. Transfers public land to states. Sec. 601 allows states, with congressional approval, to assume management authority for some or all of the Forest Service and Bureau of Land Management lands within their borders. This includes lands within the National Wilderness Preservation System, National Wild and Scenic Rivers System, and National Trails System (Sec. 602(2)). In addition, the bill allows states to keep the revenue "for each federal grazing permit, mineral lease, contract for sale of forest products, or other use authorization for such lands" (Sec. 605(c)). After 10 years of state management, states could apply to "obtain ownership of all or any portion of the eligible federal lands" (Sec. 609(b)(2)).

II. Gives the Forest Service and the BLM power to make decisions about potential harm to endangered species. Under Sec. 203(a) of the proposed bill, responsibility for ensuring that management activities do not "jeopardize the continued existence of any species determined to be endangered or threatened, or result in the destruction or adverse modification of habitat of such species designated as critical" rests with the Forest Service and the BLM. Under existing law this is the responsibility of the Secretary of the Interior through the US Fish and Wildlife Service and the Secretary of Commerce through the National Marine Fisheries Service. Thus, this change has the effect of allowing the Forest Service and the BLM to judge the potential effects of their own actions, rather than placing this responsibility in the hands of other agencies.

III. Eliminates all but two levels of management planning. Sec. 102(a) limits the levels of Forest Service and BLM planning to two: "multiple-use planning in the form of resource management plans for planning units" and "site or area specific planning for management activities."

IV. Allows parties to be fined for filing "improper" appeals. Sec. 115(b)(9) prohibits "a person from bringing an administrative appeal or filing a petition for any improper purpose . . . including to raise frivolous issues, to harass or needlessly increase the costs of the government or any other affected person, or to cause unwarranted delay" and provides that "[t]he Secretary shall reject peremptorily any appeal which the Secretary determines violates this paragraph and may . . . impose on any person who the Secretary determines violates this paragraph a civil penalty in an amount not to exceed $10,000." The criteria for what constitutes a "frivolous" appeal are not specified.

V. Exempts the Forest Service and the BLM from certain open meeting requirements when meeting with industry representatives or other people with logging, grazing, and mining permits. Sec. 206 states that when the Secretary meets with "one or more holders of, or applicants for, permits, leases, contracts, or other authorizations for use of the federal land . . . [such meetings] shall not constitute the establishment or utilization of any such individuals by any federal agency or officer under the Federal Advisory Committee Act (5 U.S.C. Appendix 2)." This wording circumvents the open meeting requirements set forth in the Federal Advisory Committee Act. According to Appendix 2 of that act, any group "established or utilized by one or more agencies" is an advisory committee (§3), which must have open meetings and maintain records available for public inspection (§10).

VI. Gives timber purchasers discounts when they do work deemed necessary to improve forest health. Sec. 408(a) gives the Secretaries of the Interior and Agriculture the authority to require that a purchaser of timber or other forest products from

federal lands undertake "a forest health management activity or activities." These can include "thinning, salvage, forest stand improvement, reforestation, prescribed burning (including natural ignition) or other fuels management, insect or disease control, riparian or other habitat improvement, or other activity," which has any of five purposes: to "arrest the decline in forest health and restore forest health . . . to a condition capable of supporting and sustaining the uses of the area within the historic range of variability of such area or as determined in the land management plan or plans applicable to such area"; to "safeguard human life, property, and communities"; to protect other forest resources "placed at risk by adverse forest health conditions, including air and water quality, wildlife, and recreation and visual values"; to "restore, maintain, or enhance the integrity of ecosystems, watersheds, and habitats damaged or placed at risk by adverse forest health conditions"; or to "protect existing federal investments" in forest resources and "future federal, State, and local revenues that otherwise would be foregone" (Sec. 408(i)). The bill stipulates that to offset the costs of undertaking such activities, the purchaser would receive "forest health credits" (Sec. 408(b)).

VII. Allows a 20% increase in the size of federal timber sales, without public notice, if the agency determines that the increase has no significant environmental impact.. Sec. 411 authorizes the Secretaries to enlarge the area of a forest products sale, after it has been awarded, by as much as 20% if "the Secretary determines that such adjustment does not require re-initiation of activities" under the National Environmental Policy Act (42 U.S.C. §4332(2)) of 1969 or the Endangered Species Act of 1973 (16 U.S.C. §1536). Again, the Forest Service and the BLM get to police themselves.

VIII. Potentially bars states from enforcing the Clean Air Act in some cases of prescribed burning on national forests. Sec. 205 states that "upon a finding by a forest supervisor of the Forest Service or a district manager of the Bureau of Land Management that a prescribed use of fire on federal lands within the jurisdiction of such official would reduce the likelihood of greater emissions from a wildfire and will be conducted in a manner that minimizes impacts on air quality to the extent practicable, such use shall be deemed to be in compliance with any applicable requirements of any State implementation plan under section 110 of [the Clean Air Act] (42 U.S.C. §7410), and any requirements imposed by the U.S. Environmental Protection Agency under such Act."

IX. Requires Senate confirmation of the Forest Service Chief. Sec. 401 requires that the Chief of the Forest Service be appointed with "the advice and consent of the Senate."

Wildflowers - We Need Them; They Need Us

by Ruth Moorhead, Sah-Wah-Be Chapter

Wildflowers assure us that the world is as it should be. Just to know that flowers can still be found is a comfort, a tie with sanity, a balm for our stresses. We need them, and they need us.

A flower is living proof of natural processes on our planet. A wildflower is the all-out, beaming hope of a plant that has found a place to grow; the hope is that it also can find what it needs to reproduce--the right pollinators; the right pollen; enough time, moisture and warmth, all at once, for maturing seeds.

We are still lucky enough in some places to see hundreds of kinds of wild flowering plants. We needn't travel far, between April and September, to make an impressive list: sunflowers, evening-primroses, buttercups, lilies, mints, buckwheats, roses. We can focus on just one, or we can enjoy the total picture. Or we can simply be happy to be in the same space as they are for a short time. It is this awe and this knowing that can restore sanity to our lives and refresh our spirits.

Wildflowers and their animal associates need our caring appreciation. They cannot speak for themselves, nor can they act for themselves after we have paved, built on, or landscaped their niches--or forced new roads through their open lands. When we bulldoze and burn, or our cattle trample and otherwise alter their special places, wildlife cannot simply go elsewhere. If we take wild spaces without saving some of them, we steal from our own accounts, and from the accounts of our children. We need wildflowers. Wildflowers need wild habitats. Work on it.

Reprinted from *Taproot*, a publication of the Idaho Nursery Association

The Palouse Grasslands--A Vanishing Ecosystem

by Juanita Lichthardt and Bob Moseley, Idaho Conservation Data Center

The Palouse region of eastern Washington and adjoining Idaho, an area uniquely suited to dry-land grain production, once supported a native grassland that was also unique in the world. Little evidence of this once vast grassland now remains. As a consequence of human alteration, the Palouse Grasslands are considered one of the most endangered ecosystems in the United States. It is estimated that only 0.1% remains in a natural state. Palouse Grassland plant associations described by Daubenmire are considered globally imperiled by The Nature Conservancy and Natural Heritage/Conservation Data Center network. They now exist only as small remnants, restricted to rocky sites that are uncharacteristic of the Palouse landscape at large. These grassland remnants represent nearly all the remaining habitat for at least five plant species endemic to the region (Table 1).

The word "Palouse," which is affixed to the region, the river whose basin encompasses most of the area, and the original inhabitants, has been attributed to both French and Indian origins meaning a "sea of grass" or "grassland plains." The term has been broadly applied in reference to both an ecological and a cultural region. In ecological usage, it has been used to refer to grasslands as far south as Utah, east to Montana, and north into British Columbia. Daubenmire, in his extensive ecological investigations of the region, refrained from using the term "Palouse" to describe the Pacific Northwest Bunchgrass grasslands. He instead chose to name vegetation zones after their dominant species, such as wheatgrass-bluegrass zone and fescue-wheatgrass zone.

A recent study of Pacific Northwest Bunchgrass grasslands in Idaho, Oregon, and Washington subdivided the biome into several ecological divisions and subdivisions on the basis of the composition and structure of the vegetation, and physical features. In this classification, the Palouse Grasslands were the native steppe vegetation occurring on the gently rolling basalt plateaus and adjacent mountain foothills covered with wind-deposited loess. They are thus distinct from the Canyon Grasslands that occur on the steep, rocky breaklands of the major river canyons.

Beginning early in this century, no ecological discussion of the Palouse Grasslands omitted mentioning that a majority of this biome has been converted to agriculture, and most of what remained had been altered by livestock overgrazing. During the initial settlement of the Palouse area in the 1860's, the land was primarily used for grazing. It was quickly recognized, however, that the deep loessal soils characteristic of the region were excellent for growing wheat. Starting about 1880, this new type of land use began to convert the grasslands to row crops, and by about 1910 all areas that could be plowed were brought into cropland. Livestock grazing continued on the larger stands of remaining Palouse Grasslands that were too rocky or otherwise impractical to plow. These were eventually converted to non-native vegetation types. There were, however, small remnants that remained in a relatively unaltered state, mostly corners of fields or areas that were not grazed heavily.

There are two disjunct areas in Idaho that had Palouse Grasslands as their native vegetation. To the north of the Clearwater River, the Palouse hills occupy an elliptical area ranging from Spokane in the north to the Snake River and Clearwater River canyons in the south, barely extending into Idaho, where they quickly

give way to the higher elevations and forested foothills of the Clearwater Mountains. South of the Clearwater River, Palouse Grasslands occupied the area referred to as the Camas Prairie, which is located entirely within Idaho. Climatic and geological processes that shaped the two areas were similar, resulting in the same dominant vegetation; however, important distinctions exist.

The Palouse hills resulted from strong winds picking up mostly silt-sized particles from south-central Washington and carrying them eastward into Idaho. Idaho portions of the Palouse received the most loess, with depths of at least 100 feet being common. It has been suggested that the shape of the Palouse hills resulted from strong wind action from the southwest, which formed sharp, dune-like crests toward the northeast. On the north and east sides of these dunes, nivation cirques and amphitheaters formed, caused by the accumulation of snowdrifts and subsequent erosion. Rainfall averages 23 inches/year in the Idaho portion, and the average elevation is about 2,500 feet.

The Camas Prairie, sometimes called the Nez Perce Prairie, is a high, rolling plain with an average elevation of 3,500 feet. Because the Camas Prairie was out of the main path of loess deposition, the soils are shallower and lack the dune-like appearance of the Palouse hills. The loess mantle is generally less than 1 meter.

Vegetation of the Palouse Grasslands

Native vegetation of the Palouse Grasslands was bunchgrass steppe with shrub thickets in draws and on north-facing hills, usually dominated by black hawthorn (*Crataegus douglasii*). Herbaceous cover was dense, with a high cover of perennial forbs. Spreading shrubs, primarily snowberry (*Symphoricarpos albus*) and wild rose (*Rosa* spp.) formed colonies on moist microsites or occurred as scattered, inconspicuous individuals.

In the most intensive study of Palouse Grasslands vegetation to date, Daubenmire identified three climax vegetation zones named for their indicator species: bluebunch wheatgrass-Idaho fescue (*Agropyron spicatum-Festuca idahoensis*), Idaho fescue-common snowberry (*Festuca idahoensis-Symphoricarpos albus*), and Idaho fescue-Nootka rose (*Festuca idahoensis-Rosa nutkana*). Only the latter two occur in Idaho portions of the prairie. Daubenmire's study included only two stands in Idaho.

Rare Flora of the Palouse Grasslands

Seven plant taxa are endemic, or nearly so, to the Palouse Grasslands (Table 1). Because of the low number of remaining populations and the drastic reduction in habitat, four of these are considered globally imperiled by the CDC/Heritage Program network. Although the ranges of all these taxa are centered on the Palouse Grasslands, each is somewhat unique in terms of optimum habitat and the nature of its overall distribution. Spalding's silene (*Silene spaldingii*) also has disjunct ranges in northwestern Montana and northeastern Oregon. Significant populations of broad-fruit mariposa lily (*Calochortus nitidus*), Palouse goldenweed (*Haplopappus liatriformis*), and Spalding's silene can also be found in the Canyon Grasslands, good examples of which occur along the Snake River between Lewiston and the Salmon River confluence.

Table 1. Plant taxa with historical ranges largely restricted to the Palouse Grasslands, and their conservation ranks (Conservation Data Center 1994; Washington Natural Heritage Program 1994).

		-Conservation Rank-			
		Federal[1]	CDC/Heritage Network[2]		
Latin name	Common name		Global	ID	WA
Aster jessicae	Jessica's aster	SOC	G2	S2	S2
Astragalus arrectus	Palouse milkvetch	none	G2G3	none	S1S2
Calochortus nitidus	broad-fruit mariposa lily	C3	G3	S3	(3)
Cirsium brevifolium	Palouse thistle	none	G3	none	monitor
Haplopappus liatriformis	Palouse goldenweed	SOC	G2	S1	S2
Silene spaldingii	Spalding's catchfly	SOC	G2	S1	S2
Trifolium plumosum var. *amplifolium*	plumed clover	none	G3T2	S2	none

1 SOC = Species of concern

2 Explanation of global (G), state (S), and infraspecific (T) ranks:
1 = critically imperiled because of extreme rarity or because some factor of it biology makes it especially vulnerable to extinction (typically 5 or fewer occurrences);
2 = imperiled because of rarity or because other factors demonstrably make it very vulnerable to extinction (typically 6 to 20 occurrences);
3 = rare or uncommon but not imperiled (typically 21 to 100 occurrences).

3 Has not been verified in Washington.

Jessica's aster (*Aster jessicae*) inhabits both grassland communities and woodland openings in the forest-grassland transition zone. It occurs primarily in the breaklands of the Potlatch and Clearwater Rivers, at the eastern extreme of the Palouse Grasslands. Its Idaho range adjoins that of Spalding's silene to the west, but the two do not overlap. It appears to be more tolerant of disturbance than the other Palouse endemics and often persists along hedgerows and in old cemeteries.

Palouse milkvetch (*Astragalus arrectus*) occupies canyon heads and moist aspects within the prairie. Much of its remaining habitat is rapidly being converted to exotic weeds.

Broad-fruit mariposa lily has the widest range of the four federally ranked species and the most known occurrences. It has a wider ecological amplitude than the other grassland taxa, ranging from the canyon grasslands to forest openings well into the mountains. Although it once occupied more mesic sites in the grassland, it is now restricted to grassy ridgecrests, canyon rims, and openings in dry conifer woodlands. It often occurs on very shallow soils. Because it extends into lower montane habitats, it occurs on public lands more than the other taxa.

Palouse thistle (*Cirsium brevifolium*) is a white-flowered thistle endemic to the Columbia Basin, where it occurs in Idaho fescue communities. Because it is not tracked in Idaho, little is known of its current status. It occurs in prairie remnants but is not usually abundant. It occurred in only one of the nineteen Idaho fescue stands sampled by Daubenmire.

Palouse goldenweed is endemic to the Palouse prairie and commonly occurs even in very small remnants if

they are in excellent condition. Its range extends into the Canyon Grassland of the Snake River, but not into the mountains. Its frequency of occurrence indicates that it was a common component of the Palouse Grasslands. Along with Spalding's silene, it appears to disappear rapidly with increased disturbance or weed encroachment.

Spalding's silene is the rarest plant in the above list. Although not strictly limited to the Palouse Grasslands, it is endemic to the Pacific Northwest Bunchgrass biome. It is restricted to slightly more mesic microsites within the grassland than Palouse goldenweed, which always occurs with it in Idaho. In the native landscape Spalding's silene probably occupied draws and north-facing slopes because it is always associated with shrubs. Spalding's silene has a disjunct range in northwestern Montana, extending just barely into British Columbia, and another in northeastern Oregon near Wallowa Lake. Most populations remaining in the Palouse and Camas Prairie areas are too small to be considered viable.

Plumed clover (*Trifolium plumosum* var. *amplifolium*) is sympatric with Palouse goldenweed, but more common and abundant, possibly due to a higher tolerance for disturbance. In Washington and Oregon, it is replaced by the type variety (*T. plumosum* var. *plumosum*), which is also considered rare.

Threats

With the exceptions noted above, most rare plants associated with the Palouse Grasslands are intolerant of disturbance and are found only in relatively unaltered bunchgrass communities. Both natural and human disturbances can lead to exotic weed invasion and eventual loss of the native community. Populations of rare species occurring in prairie remnants are especially threatened by herbicide drift from aerial spraying of adjoining fields. Some of the best remaining populations of these plants remain on footslopes of mountains adjoining the prairie, where some are threatened by conversion of the prairie for home construction. Isolated, small populations are also subject to decreased fitness due to inbreeding.

Protection

Remnants of Palouse Grasslands are under private or tribal ownership where their protection is entirely at the discretion of the land owner. In recent years there has been increasing interest in land trusts, which seek landowner cooperation in preserving open space for a variety of intangible values. Agreements negotiated with land trusts or The Nature Conservancy offer a possible avenue for protecting Palouse Grasslands remnants and associated rare species. Significant populations of rare plants characteristic of both Palouse and Canyon Grasslands also occur in the Snake River canyon south of Lewiston, where they are protected on lands managed by the Bureau of Land Management, Idaho Fish and Game, and The Nature Conservancy.

Additional Reading

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Noss, R.F., E.T. LaRoe, and J.M. Scott. 1995. Endangered ecosystems of the United States: A preliminary assessment of loss and degradation. Biological Report 28. USDI, National Biological Service, Washington, D.C. 58 pp.

The Nature Conservancy, Idaho Natural Heritage Program, and Oregon Natural Heritage Database. 1987. Final report, Phase I, 1987 National Natural Landmark Project, Pacific Northwest Region, National Park Service. Unpublished report on file at the Conservation Data Center, Idaho Department of Fish and Game, Boise, ID. 47 p.

Tisdale, E.W. 1961. Ecologic changes in the Palouse. Northwest Science 35:134-138.

A Postcard from the Field: Arkansas Spring

by Wayne Owen, Pahove Chapter

The only flower blooming when I left Boise at the end of February was the fearless *Draba verna*. When my titanic U-Haul truck and I rolled into Hot Springs, Arkansas my eyes were immediately captured by a suite of lusty magnolias, daffodils, and forsythia. Obviously, the botanical environment of my new home differs radically from the *Draba*-dotted hillsides that I had so recently left behind. Other, more pedestrian highlights differed too: abundant historical architecture (including a brothel older than the city of Boise), barbecue shacks (McClard's seems to be the local favorite), and ubiquitous "Boyhood Home of President Bill Clinton" signs.

I thought I had prepared myself for my change in venue. I studied field guides and picture books, I visited web-sites, I even got a list of the rare plants of the Ouachita National Forest from the local Heritage Program. I was well prepared, but I was still amazed by the opulance of Southern vegetation.

Large portions of the city are within Hot Springs National Park; consequently there is plenty of open space in and near this sleepy retirement community (the brothel is now a trendy cafe). My new office is downtown, about a block from the heavily wooded eastern slope of West Mountain. At least they call it a mountain. I've refrained from scoffing at Arkansas' lumpy topography out of courtesy to my new friends. We can forgive them for wishful thinking.

West Mountain is densely clothed with shortleaf pine (*Pinus echinata*) and a menagerie of hardwoods. A hodgepodge of oaks and hickories, scattered maples, a lovely serviceberry (*Amelanchier arborea*), riotous dogwoods (*Cornus florida*) and redbuds (*Cercis canadensis*), and a cavalcade of infrequent species provide multiple canopies of cover.

A walk in the local forest is a unique sensory experience and a botanical delight. The compost-scent of moist decay hangs close to the forest floor. Dry leaves crunch and shuffle, their movements glitter in dappled, golden-green shade. The rhythms of foot-steps are punctuated by the occasional squish of tiny mud-puddles. I've learned six new species of *Viola*, enjoyed the shockingly red fire campion (*Silene regia*), keyed several rare lilies (including bellflowers and multiple Trillium species), walked through acres of dwarf iris (*Iris cristata*), peeked under the leaves of bashful mayapples (*Podophyllum peltatum*), been tricked by the white-flowered crow poison (*Nothoscordum bivalve*), which looks convincingly like an onion, and swooned over all the *Andropogon* species (bluestem grasses).

You might think Arkansas is a wildflower heaven, and you'd be right. Take away repeated glaciations and serious winters, add sixty inches of annual rainfall and leaf litter to the tune of tons per acre and you can imagine how the Ouachita hills could be alive with botanical diversity. Yes, the local flora is rich, all the new species are quite exciting, and the land is bountiful and fecund. Still, I find myself longing for the brave scatterings of *Fritillaria pudica* and hardy throngs of *Balsamorhiza sagittata* of home. There are just not enough yellow flowers in Arkansas.

Chapter News *(continued from page 1)*

Pahove Chapter--Kay Beall is Acting President.

White Pine Chapter--We have just completed a successful series of winter meetings with great attendance. In January Angela Sondenaa spoke of her research on the reproductive biology of the Idaho Mountain Primrose, *Douglasia idahoensis*. Her slides of the primroses in bloom, of their scree-like high mountain habitat, and of the insects which pollinate the blooms were beautiful.

In February Dr. Penny Morgan discussed how fire historically shaped plant communities in forests, rangelands, and grasslands in the West. In March Sandi McFarland spoke of the Nez Perce utilization of plants, both past and present. She presented slides of plants used by her family and others in the tribe for food, tools, baskets, and personal care.

Wood River Chapter--Wood River is re-organizing after a quiet year, and sponsored a special presentation on "Rocky Mountain Wildflowers" with Doreen Dorward on April 16 in Ketchum. Summer field trips are in the planning stages. For information call JoAnn Robbins at (208) 788-5585 (days).

Discovery of Ute Ladies' Tresses in Idaho--a Threatened Plant Listed Under the Endangered Species Act

by Bob Moseley, Idaho Conservation Data Center

Ute ladies' tresses (*Spiranthes diluvialis*) is a white-flowered orchid that occurs in low to mid-elevation wetlands and riparian zones of the Central Rockies and adjacent plains. The specific epithet, *diluvialis*, is Latin meaning "of the flood," which is descriptive of a majority of the species' habitat: alluvial substrates along perennial streams and rivers that flood in the spring. Ute ladies' tresses was listed as Threatened under the Endangered Species Act on January 17, 1992, because of its rarity, low population sizes, and threats from loss or modification of riparian habitats.

At the time of listing, Ute ladies' tresses was known from the Denver metropolitan area, the vicinity of Provo, Utah, and several tributaries of the Green River in eastern Utah. Several populations were known to have been extirpated. Between 1992 and 1995 it was also discovered in eastern Wyoming and southwestern Montana. In light of these discoveries, the draft recovery plan prepared by the U.S. Fish and Wildlife Service recognized that potential habitat also occurred in eastern Idaho. With this recognition, the Fish and Wildlife Service granted the Idaho Conservation Data Center (CDC) money in 1996 to initiate field surveys in the state. Our mission was clear, but our task was daunting--with no leads, search for a "grassy-looking" plant in the riparian zones of the upper Snake River and Bear River watersheds, an area covering about 9,000 square miles. After discovering several populations of the common *Spiranthes romanzoffiana* (hooded ladies' tresses), the break finally came in late August.

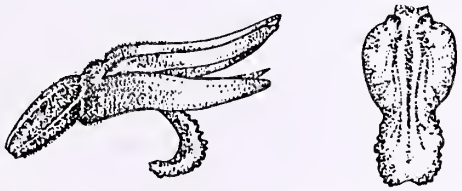
The Discovery

Alerted to its possible presence, Mabel Jankovsky-Jones, a Wetlands Ecologist at the CDC, discovered a robust *Spiranthes* while inventorying wetland and riparian communities along the South Fork of the Snake River, northeast of Idaho Falls. She tentatively identified it as *S. diluvialis*. I confirmed her identification on September 11, during a visit to the population. I discovered three additional populations along the South Fork during the next two weeks. All four populations occur on public land: three are managed by the Bureau of Land Management and one by the Targhee National Forest.

Taxonomy and Identification

Ute ladies' tresses was formally described in 1984 by Charles Sheviak. He suggests that Ute ladies' tresses originated from the hybridization of *Spiranthes magnicamporum* (a Great Plains species) and *S. romanzoffiana* (a boreal and subalpine species) during a Pleistocene pluvial period when the region supported lush grasslands and the two parent species would have been sympatric. Under a cooler and wetter climate, *S. romanzoffiana* would have occurred at lower elevations. As the climate became drier, *S. romanzoffiana* retreated to higher elevations and *S. magnicamporum* retreated to the eastern Great Plains. Ute ladies' tresses persisted in warm wet situations, eventually becoming limited to scattered areas of permanent moisture.

Prior to the discovery of Ute ladies' tresses along the South Fork in 1996, the Idaho flora was thought to contain only one member of the genus *Spiranthes*, *S. romanzoffiana*. Hooded ladies' tresses commonly occurs throughout northern and central Idaho in mid- to high-elevation fens (wetlands with stable, organic substrates). It is uncommon in eastern Idaho, where it is known from fens above 6,000 feet in the Teton Valley, Island Park, and near Blackfoot Reservoir. The Teton Valley site is 25 air miles north of Ute ladies' tresses populations on the South Fork, while the Blackfoot Reservoir population is 35 miles to the south. Both of these hooded ladies' tresses populations are about 1,000 feet higher in elevation and occur in different ecological settings than Ute ladies' tresses. Nevertheless, it is the differentiation of these two species that is important when conducting inventories in Idaho.



Spiranthes diluvialis (x5)

Spiranthes romanzoffiana (x5)

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In general, Ute ladies' tresses is a more robust plant in every respect. It is taller, with larger leaves, bigger flowers, etc. This is not surprising given that Ute ladies' tresses is a polyploid, in part derived from hooded ladies' tresses; relative gigantism is one of the characteristics of a polyploid. Hooded ladies' tresses has a tight helix of inflated, ascending flowers around the spike, fused sepals that are united with the petals to form a prominent hood above the lip, and a violin-shaped (pandurate) lip. In contrast, Ute ladies' tresses has flowers facing directly away from the stalk (neither ascending nor nodding), sepals that are free, a hood that is rarely evident, and a lip with a less prominent violin shape. The flowers of hooded ladies' tresses tend to be more cream-colored, while Ute ladies' tresses are pure white.

Following is a key to the two species, adapted from the second edition of *A Utah Flora*, by Welsh et al., published by Brigham Young University in 1993.

1a. Petals free for (3.5) 4.5-6.5 mm; rachis of inflorescence with at least some hairs more than 0.2 mm long; plants of middle and lower elevations .....*S. diluvialis*

1b. Petals free for 2-3.5 mm; rachis of inflorescence glabrous or with very short glandular hairs, mainly less than 0.1 mm long; plants of middle to upper elevations .....*S. romanzoffiana*

Current Distribution in Idaho

Four populations of Ute ladies' tresses were discovered in Idaho during 1996. They constitute the known distribution of the species in the state. All four occur along about 30 river miles of the South Fork of the Snake River between Heise and Swan Valley in Bonneville and Jefferson counties. A total of 201 plants were counted at the four sites in 1996. One population is relatively large, with 173 plants, while in the other three populations 12 plants, 15 plants,

Spiranthes romanzoffiana (

Spiranthes diluvialis (x1)

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and one individual were counted. Further inventories may expand the estimated sizes of these populations.

Habitat

Ute ladies' tresses is known from two types of communities in Idaho: (1) *Eleocharis rostellata* (wandering spike-rush) and (2) *Elaeagnus commutata* (silverberry). Floodplain vegetation adjacent to these communities includes cattail (*Typha latifolia*) marsh, narrowleaf cottonwood (*Populus angustifolia*), and water birch (*Betula occidentalis*) types. Vegetation of slopes bordering the South Fork is dominated by Wyoming big sagebrush (*Artemisia tridentata* var. *wyomingensis*), Douglas-fir (*Pseudotsuga menziesii*), bigtooth maple (*Acer grandidentatum*), and Rocky Mountain juniper (*Juniperus scopulorum*).

The habitat of Ute ladies' tresses is pretty generic stuff, with the rhizomatous grass, redtop (*Agrostis stolonifera*), being the best indicator species of potential habitat along dynamic streams and rivers. Nothing odd or peculiar about this. It also can occur in fairly stable communities dominated by wandering spike-rush in Idaho and Utah. This is an odd habitat in Idaho. It's only known from around hot springs or alkaline wetlands in central Idaho, although it is widely scattered in eastern Idaho in non-thermal peatlands. The riparian areas where Ute ladies tresses' is found in Utah and Idaho are most concisely characterized as medium to large streams and rivers that generally have moderate (not slow and meandering) gradients where they near the edge of the mountains or flow out onto the plains, but before they start to slow down. It does not occur in dense shrub patches, although it can occur in small grassy openings within such stands. Soil must be moist to the surface throughout the growing season. This moisture level is usually maintained by capillary fringe from the water table. Populations can be flooded in the spring. It starts flowering in August and is pretty much through flowering by late September.

Throughout the range of Ute ladies' tresses, redtop appears to be one of the most reliable indicators of suitable habitat. It indicates a mesic habitat that is dryer than sedge-dominated sites and wetter than habitats supporting Kentucky bluegrass (*Poa pratensis*). Redtop is a densely rhizomatous grass that is native to Europe and has been widely introduced into North America. The composition and structure of Ute ladies' tresses habitats prior to invasion by redtop is unknown. Redtop commonly has high cover in many shrub and forested riparian community types in eastern and central Idaho.

1997 Inventories in Idaho

Soon after the discovery of this listed Threatened species, the Fish and Wildlife Service added Ute ladies' tresses to the list of species requiring Endangered Species Act consultation by federal land managers in eastern and central Idaho. This elicited a great deal of interest in conducting inventories to better elucidate the distribution of the plant in the state. Ecologists and botanists at the CDC will be conducting both intensive and extensive inventories for Ute ladies' tresses throughout eastern and central Idaho. You'll see us from Bloomington to Baker and Malad City to Macks Inn. So, stay tuned!

Chapter Presidents: We want to hear about your summer events. Please have information for the next Sage Notes to the editor by August 15 (which will be here before you know it!). Thanks.

Sage Notes needs computer help. If anyone has the capability of scanning artwork for Sage Notes, please contact the editor.

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